

METHODS OF SAMPLING AND TESTING
MT 511-04
TERM RELATING TO SUBGRADE, SOIL AGGREGATE
AND FILL MATERIALS

1 Scope:

- 1.1 These definitions cover terms used in descriptions and specifications of materials occurring as or employed in the construction of sub-grades, soil-aggregate base and surface courses and fills.

2 Definitions of Rock and Soil:

- 2.1 **Rock** - Natural solid mineral matter occurring in large masses of fragments.
- 2.2 **Soil** - Sediment or other unconsolidated accumulation of solid particles produced by the physical and chemical disintegration of rocks and which may or may not contain organic matter.
- 2.3 **Broken Rock** - Angular fragments of rock which will be retained on a 3-inch sieve.
- 2.4 **Boulders** - Rounded fragments of rock, which will be retained on a 3-inch sieve.

3 Definitions of Soil- Aggregate and its Components

- 3.1 **Soil – Aggregate (Dense- Grade Aggregate)** - Natural or prepared mixtures consisting predominately of stone, gravel, or sand and containing silt-clay (minus No. 200 material) .
- 3.2 **Stone** - Crushed or naturally angular particles or rock which will pass a 3- inch sieve and be retained on a No. 10 sieve.
- 3.2.1 **Coarse Stone** - Stone passing the 3-inch sieve and retaining on the 1-inch sieve.
- 3.2.2 **Medium Stone** - Stone passing the 1-inch sieve and retaining on the 3/8-inch sieve.
- 3.2.3 **Fine Stone** - Stone passing the 3/8-inch sieve and retaining on the No. 10 sieve.
- 3.3 **Gravel** - Rounded particles of rock, which will pass a 3-inch sieve and be retained on a No. 10 sieve.
- 3.3.1 **Coarse Gravel** - Gravel passing the 3-inch sieve and retaining on the 1 –inch sieve.
- 3.3.2 **Medium Gravel** - Gravel passing the 1-inch sieve and retaining on the 3/8-inch sieve.
- 3.3.3 **Fine Gravel** - Gravel passing the 3/8-inch sieve and retained on the No. 10 sieve.
- 3.4 **Sand** - Granular material resulting from the disintegration, grinding, or crushing of rock and which will pass the No. 10 sieve and be retained on the 200 sieve.
- 3.4.1 **Coarse Sand** - Sand passing the No. 10 sieve and retaining on the No. 40 sieve.
- 3.4.2 **Fine Sand** - Sand passing the No. 40 sieve and retaining on the No. 200 sieve.
- 3.5 **Silt-Clay (minus No. 200)** - Fine soil particles which will pass the No. 200 sieve.
- 3.5.1 **Silt Fraction** - Material passing the No. 200 sieve. and larger than .005 mm.

3 Definitions of Soil- Aggregate and its Components:

3.5.2 Clay Fraction - Materials smaller than .005 mm.

3.6 Colloids - Materials smaller than .001 mm.

4 Definitions of Pavement Substructure Components:

4.1 Embankment Foundation - The material on which an embankment is placed.

4.2 Embankment (Fill) - A raised structure of soil, soil-aggregate, or rock.

4.3 Sub-grade (Basement Soil) - The prepared and compacted soil immediately below the pavement system and extending to such depth as will affect the structural system.

4.4 Sub-base - The layer used in pavement system between the sub-grade and the base course.

4.5 Base - The layer used in a pavement system to reinforce and protect the sub-grade or sub-base.

